

Grand Rapids Community College (GRCC) Articulation Agreement & Transfer Guide

Manufacturing Engineers get involved on the ground level of the production of a variety of industrial and consumer goods and develop the expertise to see production through to completion. Their knowledge of process design, analysis, planning, supervision, manufacturing methods, and equipment is used from start to finish. The location of every machine, the movement of each tool or part, the order of operation, and the selection of the machines themselves are all decisions that Manufacturing Engineers make as part of the total production process. Students learn to identify and select materials based on production requirements and work closely with computer-aided design equipment. Employment opportunities exist across the spectrum of manufacturing industries. Specific position titles such as Manufacturing Engineer, Process Engineer, Production Engineer, Tool Engineer, Quality Engineer, and Industrial Engineer often are given to the individual performing Manufacturing Engineering functions.

Course requirements that may be completed at Grand Rapids Community College

GRCC Course	Ferris Equivalency	GRCC Course Title	GRCC Credit Hours
EG 110	ETEC 140	Industrial Graphics w/CAD	3
MN 219	PLTS General Cr.	Survey of Polymer Technology	3
MN 220	PLTS General Cr.	Basic Plastic Processes	4
MA 108 and MA 110 or MA 131 or MA 133	MATH 130 or MATH 220	Trigonometry and College Algebra or Pre-calculus or Calculus with Analytic Geometry 1	7 – 5
EN 100 or EN 101	ENGL 150	College Writing or English Composition 1	3
EN 102	ENGL 250	English Composition 2	3
MN 165	PLTS 223	Plastics Testing	4
MN 223	PLTS General Cr.	Injection Molding	3
MN 242	PLTS 211	Applied Injection Molding	4
PH 125	PHYS 211	College Physics	5
DR 241	CDTD General Cr.	Mold Design and Theory	3
COM 131	COMM 121	Fundamentals of Public Speaking	3
MN 244	PLTS 121	Advanced Plastics Processes	4
MN 119	MFGT General Cr. and MFGT 150	Intro to Machine Operations	4
DR 258 or DR 260 or DR 150	CDTD General Cr. or APPS 305 or APPS 305	Pro Engineering or Catia or Solidworks	3
TE 114	MATL 240	Material Science	4
MN 217	MECH General Cr.	Hydraulics	4
Varies	Varies	FSU General Education – Self and Society Elective	3
Varies	Varies	FSU General Education – Culture Elective	3
Total Grand Rapids Community College Credits			68 – 70

FSU General Education Requirements can be found at: [Ferris General Education Program](#).

Students are encouraged to work with an advisor to select appropriate general education courses.

All FSU General Education – Self and Society and Culture Electives may be completed at GRAND RAPIDS COMMUNITY COLLEGE; however, students should consult with a Ferris Faculty Advisor prior to completing the courses due to the timeline and sequencing needed to complete the degree.

Course requirements that will need to be completed at Ferris State University

Ferris Course	Ferris Course Title	Ferris Credit Hours
Varies	FSU General Education – Culture Electives – Minimum 6 credits from 2 different disciplines with 1 course at 200 level or higher	6
Varies	FSU General Education – Self and Society Electives – Minimum 6 credits from 2 different disciplines with 1 course at 200 level or higher	6
MATH 220	Analytical Geometry/Calculus	4
MECH 340	Statics and Strengths	4
MFGE 311	Industrial Engineering	4
MFGE 312	CNC and CAM	4
MFGE 321	Metrology	3
MFGE 322	Production Processes	3
MFGE 324	Principles of Process Planning I	3
MFGE 326	Process Tolerance Design and Analysis	2
MFGE 341	Quality Science Statistics	3
MFGE 342	Statistical Process Engineering	3
MFGE 393	Internship in Manufacturing Engineering	4
MFGE 411	Principles of Process Planning II	2
MFGE 421	Automation and System Design	4
MFGE 422	Manufacturing Facilities Planning	3
MFGE 423	Engineering Economics	2
MFGE 442	Design of Experiments	3
WELD 416	Production Welding Processes	2
Total Ferris Credits		65
Total Credits Required for Degree		132 - 134

Program Contact Information:**Main Campus, Big Rapids****College of Engineering Technology**(231) 591-3773 | [College of Engineering Technology Website](#)**Ferris Statewide – Grand Rapids**(616) 451-4777 | [Ferris Grand Rapids Email](#) | [Ferris Statewide Website](#)[Transfer Partnerships Website](#)**General Admission Criteria**

To be admitted to this degree, students must have completed 57 semester hours of college course work with an overall 2.50 GPA or department approval is required. Successful completion of a course requires a grade of “C” or higher for any credits taken at an institution other than Ferris. Students will need to submit official transcripts from all accredited colleges/universities with their application. If re-admission is required, students are subject to the latest check sheet requirements. This program requires a computer laptop; see advisor for laptop specifications.

Advising Notes

It is recommended that potential applicants meet with an advisor to review the degree, course schedule, and have any questions answered prior to completing an application. Students who are completing the MTA may have different general education course requirements for the particular degree selected. Meeting with a Ferris advisor prior to the selection of general education or elective course work may reduce the chance of completing a course that will not apply toward the selected degree. Once admitted, students must continue to meet with an advisor as they work toward graduation. Students are encouraged to work with their Ferris Advisor for selection of any electives, to ensure transferability and to minimize credits taken.

Transfer Student Orientation

All new students to Ferris State University are required to complete an orientation.

Online Learning

Select courses are delivered online and/or in a mixed delivery format (i.e. a mix of online and face-to-face instruction at the Ferris Main Campus or at an off-campus location). The “Online Readiness Tutorial” is required for students who register for an online *course* or are completing an online *degree*. Students must demonstrate competency in Blackboard skills. This may be done by taking a tutorial and quiz, or, for students who have already taken and passed online courses, submitting a waiver request. Students should check with the department that offers the class to determine its particular needs and/or the Ferris advisor regarding registration for online course work.

Reverse Transfer Agreement

The Community College and Ferris have entered into a partnership in order to work collaboratively and creatively to increase student completion of associate and bachelor degrees. The partners work together to provide a seamless transfer experience and increase student retention and completion at both the community college and Ferris.

Michigan Transfer Agreement (MTA)

Ferris participates in the Michigan Transfer Agreement (MTA). This agreement will facilitate the transfer of general education requirements from one Michigan institution to another. Students may complete the MTA as part of a degree program or as a stand-alone package. The MTA consists of a minimum of 30 general education credit hours as identified by the college or university.

Students transferring to Ferris with the Michigan Transfer Agreement (MTA) and entering a degree program will have met a 30-hour block of lower-level general education courses. However, this does not exempt students from completing program specific prerequisites or higher-level general education course requirements. Students should contact their advisor regarding classes that meet the MTA.

Students are encouraged to work with their Ferris advisor for selection of any electives, to ensure transferability and to minimize credits taken.

Original Signed Articulation Agreement

The original, signed document is kept on file in the Office of Transfer and Secondary School Partnerships. To obtain a copy of the original, signed document, contact the Office of Transfer and Secondary School Partnerships at 231/591-5983 or email your request to transfercenter@ferris.edu.

This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail, or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

Indemnification

To the extent permitted by law, Ferris State University and the Community College agree to indemnify and hold one another harmless from any and all claims initiated by student participants, their parents, survivors, or agents, arising from any negligent acts or omission on the part of either institution or any of their employees.

Articulation Agreement

Effective Dates: September 1, 2019 – September 1, 2022

This Agreement shall commence as of September 1, 2019. Minor updates to the agreement may be made during this time. This agreement may be renewed at the end of four years. Either party may terminate this agreement by providing the other party with written notice of the intent to terminate the agreement. The agreement shall terminate not less than one hundred eighty (180) days from the date of the termination notice, unless otherwise agreed in writing by both parties.

Signatures

Ferris State University
1201 S. State Street
Big Rapids, MI 49307
Phone: (231) 591-2000

Grand Rapids Community College
143 Bostwick Avenue N.E.
Grand Rapids, MI 49503
Phone: (616) 234-4000

September 1, 2019

Rich Goosen
Interim Dean
College of Engineering Technology

September 1, 2019

Amy Mansfield
Dean
School of Workforce Development

September 1, 2019

Dean Krager
Program Coordinator
School of Design and Manufacturing

September 1, 2019

Nate Spahn
Department Head
Manufacturing